

ONTARIO DEPARTMENT OF AGRICULTURE.

TORONTO, MARCH 25TH, 1895.

SPRAYING CALENDAR.

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SOLUTIONS RECOMMENDED.

1. *Copper Sulphate Solution.*

Copper sulphate	1 pound.
Water	20 gallons.

To be used only before the buds burst, and never to be applied on the foliage. When applied to peach trees use 25 gallons of water instead of 20 gallons.

2. *Bordeaux Mixture.*

Copper sulphate	5 pounds.
Lime (fresh)	4 pounds.
Water	40 gallons.

Suspend the copper sulphate in five gallons of water. This may be done by putting it in a bag of coarse material and hanging it so as to be covered by the water. Slake the lime in about the same quantity of water. Then mix the two and add the remainder of the 40 gallons of water. Warm water will dissolve the copper sulphate more readily than cold water. If the lime is at all dirty strain the lime solution. Use wooden vessels.

3. *Ammoniacal Copper Carbonate Solution.*

Copper carbonate	1 ounce.
Ammonia, sufficient to dissolve the copper carbonate.	
Water	9 gallons.

The copper carbonate may be dissolved and kept on hand to dilute when necessary.

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Plant.	First application.	Second application.	Third application.	Fourth application.	Fifth application.
1. <i>Apple</i> Scab, codling moth, bud moth.	Copper sulphate about the time buds are swelling.	Bordeaux, just before blossoms open ; Paris green for bud moth, when buds open.	Bordeaux and Paris green, when blos- soms have fallen.	3-12 days after Bor- deaux and Paris green.	Bordeaux 10-15 days later.
2. <i>Pear</i> Leaf blight, scab, codling moth.	Copper sulphate when buds are swelling.	Bordeaux just before blossoms open.	Bordeaux and Paris green, after blos- soms have fallen.	9-12 days after Bor- deaux and Paris green.	Bordeaux 10-15 days later.
3. <i>Plum</i> Rot, etc., and cur- cullo.	Copper sulphate before buds open.	Bordeaux and Paris green as soon as blossoms fall.	9-12 days after Bor- deaux and Paris green.	Bordeaux 10-20 days later.	Ammoniacal copper carbonate 10-20 days later.
4. <i>Cherry</i> Rot, aphid, slug.	Bordeaux as the buds are breaking. If aphid appears kero- sene emulsion.	Bordeaux, when fruit has set ; for slugs dust leaves with air-slaked lime. Hellebore also good against slug.	Bordeaux, 10-15 days after, if rot appears.	Ammoniacal copper carbonate 10-15 days later.	
5. <i>Peach</i> Rot, mildew.	Copper sulphate be- fore buds swell.	Bordeaux before flowers open.	Bordeaux, when fruit has set.	Ammoniacal carbon- ate when fruit is nearly grown.	Repeat fourth 5-10 days later.

6. <i>Grape</i> Mildew, etc., flea beetle.	Copper sulphate, when buds swell. Paris green for flea beetle.	Bordeaux, when leaves 1½ inches in diameter ; Paris green for	Bordeaux, when flowers have fallen Paris green for	Bordeaux 10-15 days later.	Bordeaux, 10-15 days later if decay
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5. Peach Rot, mildew.	Copper sulphate be- fore buds swell.	Bordeaux before flowers open.	Bordeaux, when fruit has set.	Ammoniacal carbon- ate when fruit is nearly grown.	Repeat fourth 5-10 days later.
6. Grape Mildew, etc., flea beetle.	Copper sulphate, when buds swell. Paris green for flea beetle.	Bordeaux, when leaves 1½ inches in diameter; Paris green for beetle.	Bordeaux, when flowers have fallen Paris green for beetle.	Bordeaux 10-15 days later.	Bordeaux, 10-15 days later if disease still appears.*
7. Raspberry Anthracnose, rust.	Copper sulphate be- fore buds break.	Bordeaux if rust appears during summer.	Bordeaux if the trouble appears to continue.	The only remedy, as yet, for orange rust is to cut out diseased plants.	
8. Currant Worms and mildew.	Paris green or helle- bore for worms.	Hellebore 10 days later for worms; Bordeaux for mil- dew.	Hellebore if neces- sary for worms.		
9. Gooseberry Mildew and worms.	Bordeaux as soon as leaves expand for mildew, hellebore for worms.	Bordeaux 10-15 days later. Worms as before.	Ammoniacal copper carbonate 10-15 days later.	If further treatment required for mildew repeat third 10-15 days later.	
10. Tomato Rot, blight.	Bordeaux, as soon as rot or blight appears.	Bordeaux, if trouble continues.	Bordeaux if necessary.		
11. Strawberry Rust.	Bordeaux when first fruits are setting.	Ammoniacal copper carbonate when first fruits are ripening.	Bordeaux, when fruit is taken off.	Bordeaux if trouble continues.	
12. Potato Blight, beetles.	Paris green as soon as beetles appear.	Bordeaux, when plants about six inches high.	Bordeaux 10-15 days later.	Repeat if necessary in 10-15 days.	
13. Cabbage.	Pyrethrum may be applied in solution or dusted on, 1 part pyrethrum to 6-8 parts flour.				

*If further applications are necessary use ammoniacal copper carbonate.

4. *Paris Green Mixture.*

Paris green	1 pound.
Water	200 to 300 gallons.

Use about 200 gallons of water for apple trees, 250 for plum trees and 300 for peach trees. When used upon peach trees add 1 pound of lime to the mixture. When Paris green is added to the Bordeaux mixture to form a combined insecticide and fungicide add 4 ounces to every 50 gallons of the Bordeaux mixture.

5. *Hellebore.*

White hellebore (fresh)	1 ounce.
Water	3 gallons.

6. *Kerosene Emulsion.*

Hard soap!	$\frac{1}{2}$ pound.
Boiling water	1 gallon.
Coal oil	2 gallons.

After dissolving the soap in the water add the coal oil and stir well for 5 to 10 minutes. A syringe or pump will assist much in this work. Dilute with from 9 to 15 parts of water.

7. *Pyrethrum.*

Pyrethrum powder (fresh)	1 ounce.
Water	4 gallons.

NOTES.

1. When there is danger of disfiguring fruit with the Bordeaux mixture use the ammoniacal copper carbonate solution.
2. Paris green and Bordeaux mixture may be applied together as well as separately, and thus save time.
3. Paris green is to be used for insects that *chew*, and kerosene emulsion for those that *suck* the juices of plants.
4. Prepare the mixtures well, apply them at the proper time, and be as thorough as possible in the work.

